LALLY COLUMNS

1897—1917

TD CAT 1917 United States Columns

ATHENAEUM OF PHILADELPHIA

pm. Plaster 3/89

Jan - 1917

United States Column Co.

CAMBRIDGE, MASSACHUSETTS

Established 1897

❖

LALLY COLUMN CO. OF NEW YORK

Calyer and Russell Streets

Brooklyn, New York

❖

LALLY COLUMN CO. OF CHICAGO

4001 Wentworth Avenue

Chicago, Illinois

Manufacturers of

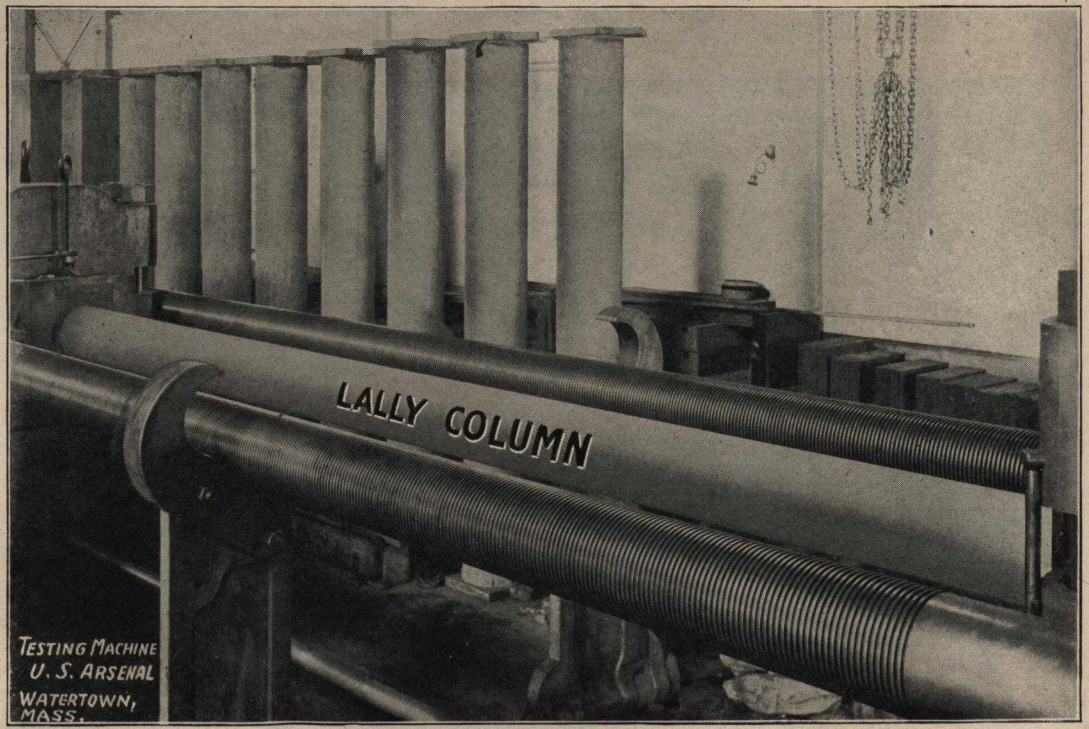
LALLY PATENT COLUMNS

CONTENTS

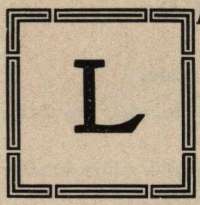
John Lally, Inventor of the LALLY COLUMN 3
Testing a Lally Column at the Watertown Arsenal . . . 4
Description of Lally Columns 5
Specifications of Lally Columns 6-7
Descriptions of Standard Bracket Caps 8-10
Latest Bracket Cap Construction 11
Bracket Cap with Double Flange Connections 12
Continuous Lally Columns 13
Ornamental Lally Columns 14
Standard Lally Columns 15
Adjustable Caps 16
Lally Columns with Beam Supports at Different Elevations 17
Continuous Veranda Support 18
Railroad Shelter Construction Using Lally Columns . . 19
Reinforced Lally Columns 20-21
Steel Built-up Bases 22
Sizes of Caps and Bases for Light-Weight Columns Carried in Stock 23
Diameter and Lengths of Light-Weight Columns Carried in Stock 23
Price List of Lally Light-Weight Columns 24
Strength List of Lally Light-Weight Columns 25
Price List of Lally Heavy-Weight Columns 26-27
Strength List of Lally Heavy-Weight Columns 28
Advantage of Lally Columns 29-31
Tests Made at Wentworth Institute 32
Buildings Equipped with Lally Columns 34-43
Views of Chelsea and Salem Fires, Effect on Lally Columns 44-58
Building in which Lally Columns Were Used 62-63
Patents on Lally Columns 64

#24508796B Td Cat
10-7-91 1917
10-13-2004 United...

JOHN LALLY, Inventor of "Lally Columns"



Testing a Lally Column



ALLY COLUMNS are a building support made up of a steel outer shell and a compact filling of concrete. They are the best, cheapest, and most durable support made. The LALLY COLUMNS are made in a modern factory, thoroughly equipped with modern machinery. Each LALLY COLUMN must take so much filling, weigh so much, and stand so many tons compression. Each LALLY COLUMN goes through a process of manufacture, by special machinery, which entirely eliminates air holes or cavities. Each LALLY COLUMN is stamped with our trade mark, "LALLY PATENT COLUMN." Each column is filled under the supervision of an official inspector. The outside shell of a LALLY COLUMN is made of steel. The inner part, or filling, is made of sand, cement, and blue trap rock of the highest quality, automatically measured, machine mixed and thoroughly compressed, giving the highest possible results for the compression of concrete. These facts are proven by our United States Arsenal tests.

LALLY COLUMNS are manufactured complete, and shipped ready to set up in the building in one fourth the time of any other columns.

Why Architects Should Specify

Lally Columns

1. Because they are the best supports known.

2. Because they are absolutely reliable for what we claim for them.

3. Because by our system of reinforcement a much smaller diameter may be used when desired.

4. Because we are the only people in the column business equipped with special machinery for making such columns.

5. BECAUSE WE ARE THE ORIGINATORS, AND ALL OTHERS ARE INCOMPETENT, INEXPERIENCED, WOULD-BE IMITATORS.

6. Because we have a full line of tests from the United States Arsenal to prove the value of LALLY COLUMNS.

7. Because there is no danger of failure of our steel bracket caps, as in the case of cast iron. The uncertainty of a cast-iron bracket is conceded by all authorities.

8. Because in the hundreds of thousands of columns used in our fifteen years experience we have not had one accident caused by our columns.

9. Fire, water, and weight will quickly destroy a hollow column, but many times the same quantity of fire, water, or weight will not even affect the LALLY COLUMN.

10. The LALLY COLUMN can be furnished in less than one quarter the time that a cast iron or a steel made-up column can be turned out, making a large saving of time, which is a saving of money.

11. Because the Lally Patent Steel Cap for beams and continuous column connection is so far superior to the Loose Cast Iron Cap used by our imitators. See pages 29, 30, and 31.

Why Architects Should Insist Upon Using the

Lally Column

When They Specify it

Because there are, unfortunately, a number of unscrupulous people who are always anxious to "skin the job"; and such men frequently try to substitute some cheap, worthless article for the LALLY COLUMN, regardless of the injustice to the owner and the architect. All for the saving to themselves of a few cents on an article of the most vital importance in the whole building — the supports.

We invite comparison of the LALLY COLUMN with any column on the market, in actual test, knowing that for strength, durability, and economy it is without a peer.

LALLY COLUMNS are cheaper in the same carrying capacity than any other column.

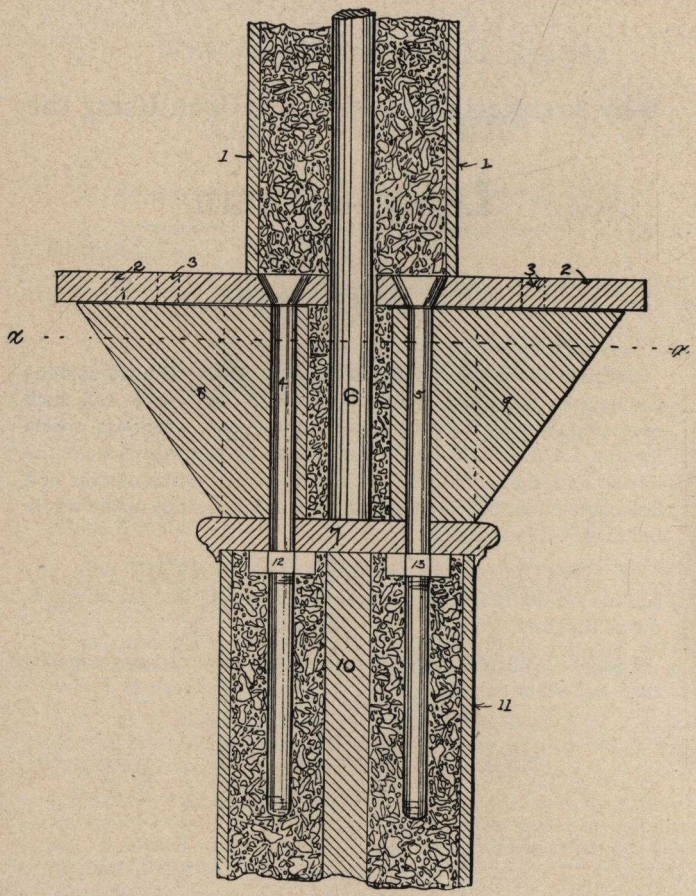


Fig. A

Showing a detail of the construction of our standard Steel Patent Cap. This whole arrangement makes a complete assembled steel and concrete bracket cap for beam and continuous column connections.

Description of Fig. A

(In corresponding numerals)

1. Represents steel shell of upper column.

2. Represents crown plate of bracket cap upon which beams or girders rest.

3. Holes for bolts to fasten beam to plate 2.

4, 5. Represent tie bolts passing from crown plate 2, through brackets 8 and 9, also through cap 7, entering the casing 11 of the lower column, and also embedded in the concrete.

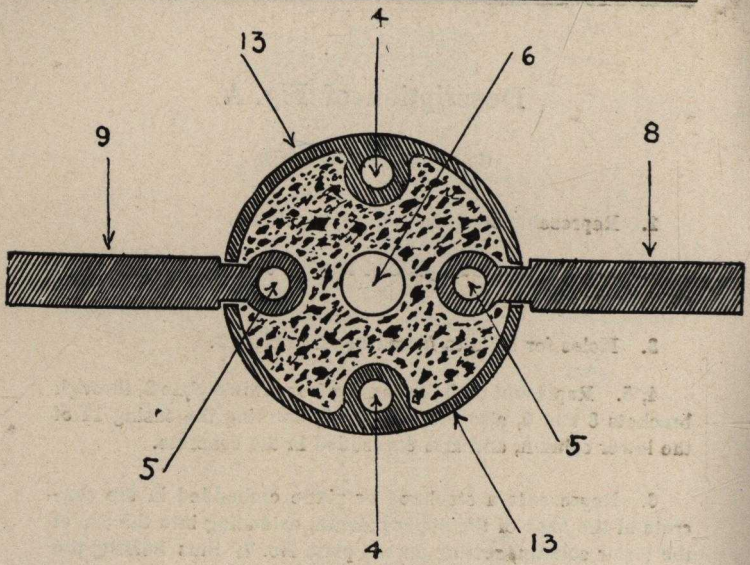
6. Represents a steel rod or pintle embedded in the concrete at the base of the upper column, extending into the cap of the lower column, resting on cap plate No. 7, thus holding the upper column firmly in position.

7. Represents a cap plate which sets on casing No. 11 of the lower column, forming a seat for brackets 8 and 9, through which the bolts 4 and 5 pass.

8, 9. Are brackets setting on cap 7, extending to the under side of crown plate 2, with bolts 4 and 5 passing through same, making a bracing support for crown plate 2, on which beams rest.

10. Represents a reinforcement of steel embedded in concrete of lower column, passing from under side of cap 7 to base of column.

11. Represents steel shell of lower column.



Plan of LALLY PATENT steel cap at section x x of Fig. A

Description

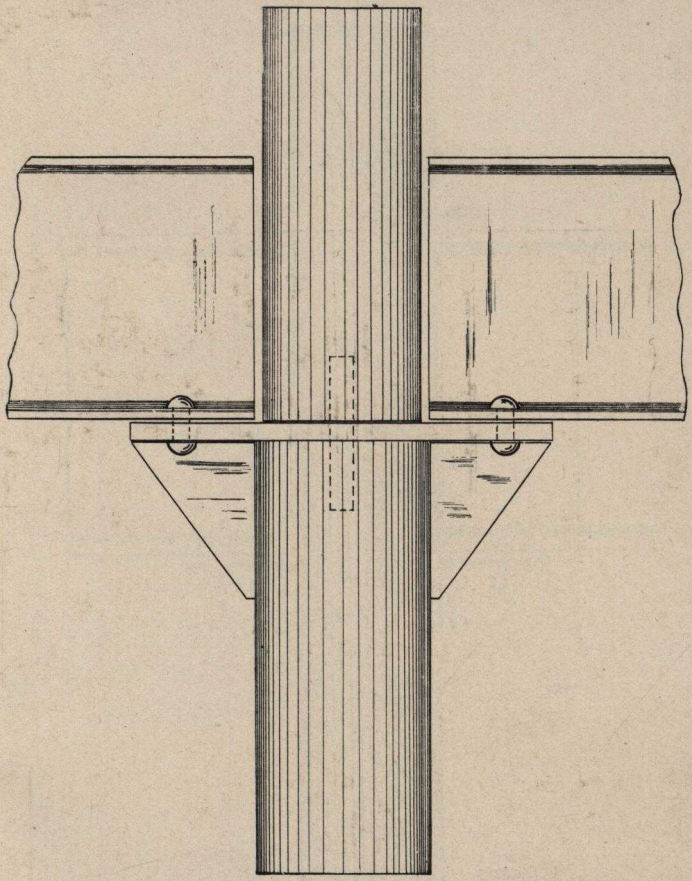
(In corresponding numerals)

No. 4 and No. 5 show tie bolts which bind the members of the cap and secure the cap to the column shaft.

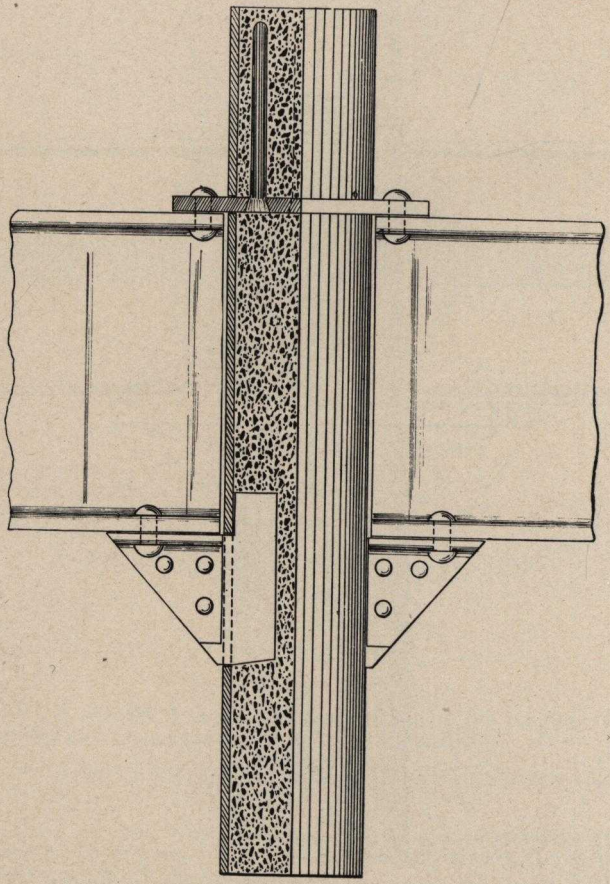
No. 6 shows the dowel pin which extends from the upper column.

No. 8 and No. 9 show strengthening brackets through which bolts No. 4 and No. 5 pass. These brackets support the crown plate upon which the beams rest.

No. 13 shows segments which form the neck of the cap and make a uniform support for crown plate No. 2 of Fig. A.



The above cut shows our latest construction of bracket and beam support where one column sets over the other. This cap consists of crown plate and steel bracket inserted through slots in the column shaft and firmly affixed thereto.



The above cut shows a special connection fastening top and bottom flanges of beams securely to column.

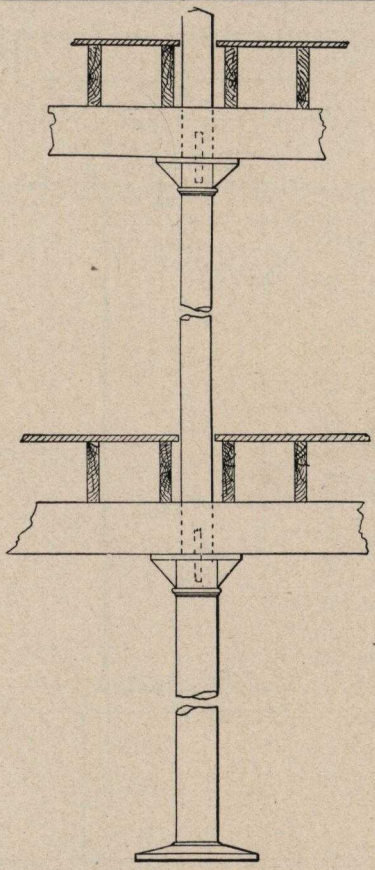


Fig. C

Shows continuous LALLY COLUMN and Beam connection. The upper column resting on crown plate of lower column. Both columns are connected by a dowel pin as shown, or may be bolted together if desired.

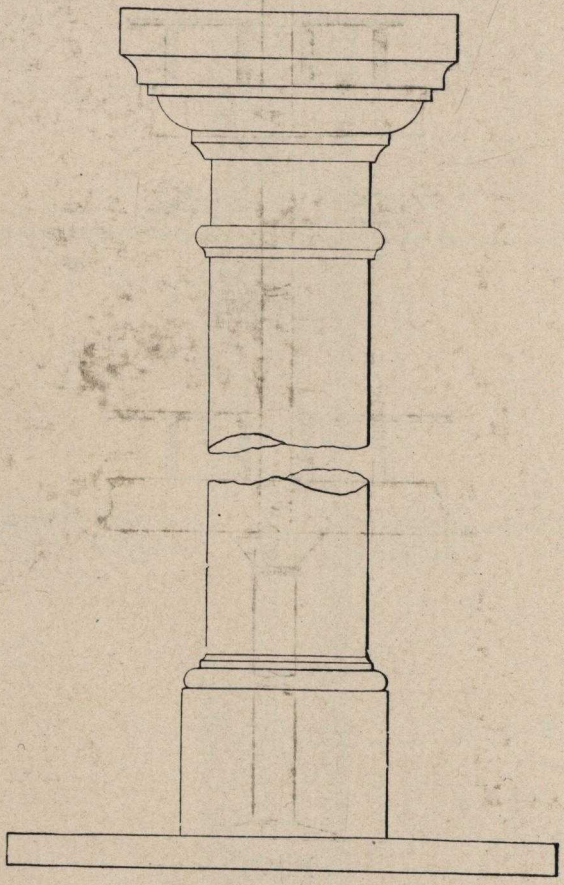


Fig. D

Ornamental column for exterior and interior work.

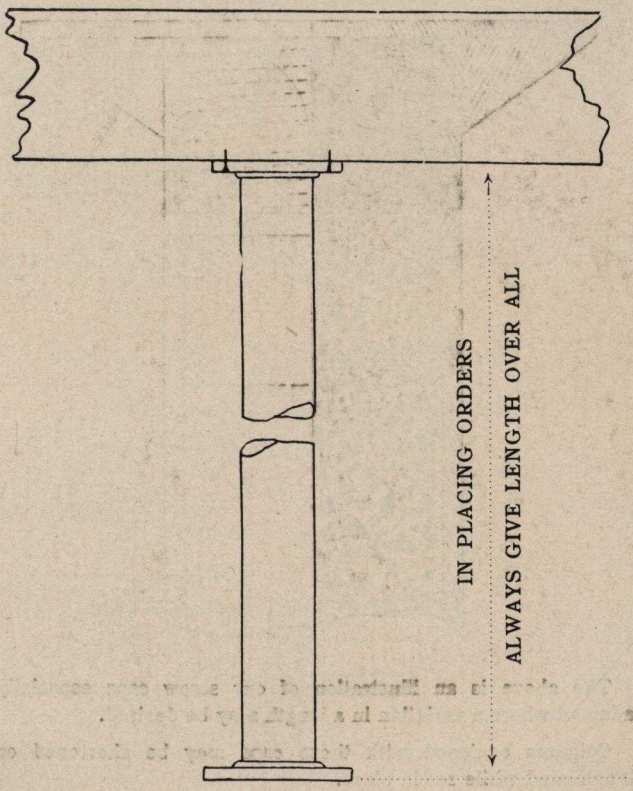
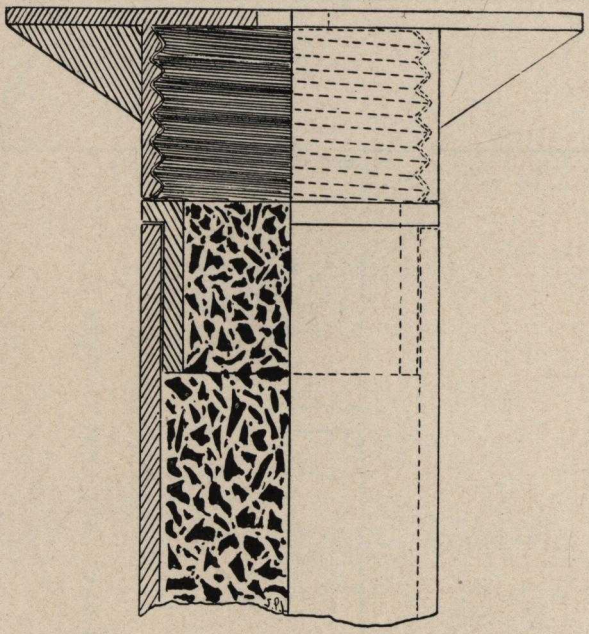


Fig. F

Plain Shaft Column with Ordinary Plate for Wood Beam Connection.

For stock lengths and sizes of caps and bases, see page 23.

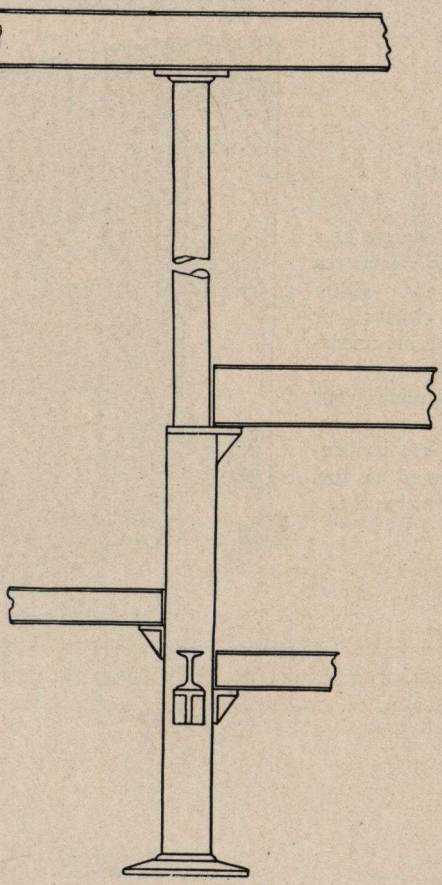


The above is an illustration of our screw caps especially adapted where a variation in a length may be desired.

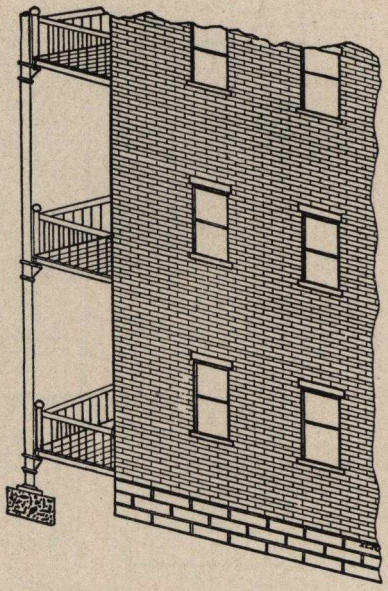
Columns equipped with these caps may be shortened or lengthened while set in place.

This type of column will be appreciated by persons familiar with the erecting of columns, as it eliminates the necessity of shimming.

We carry these caps in stock for 4 inch, 4½ inch, and 5 inch columns only.

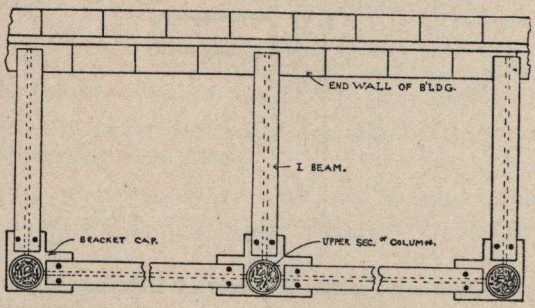


Lally Column with Beam Supports at Different Elevations. These columns may be arranged to meet any requirements.

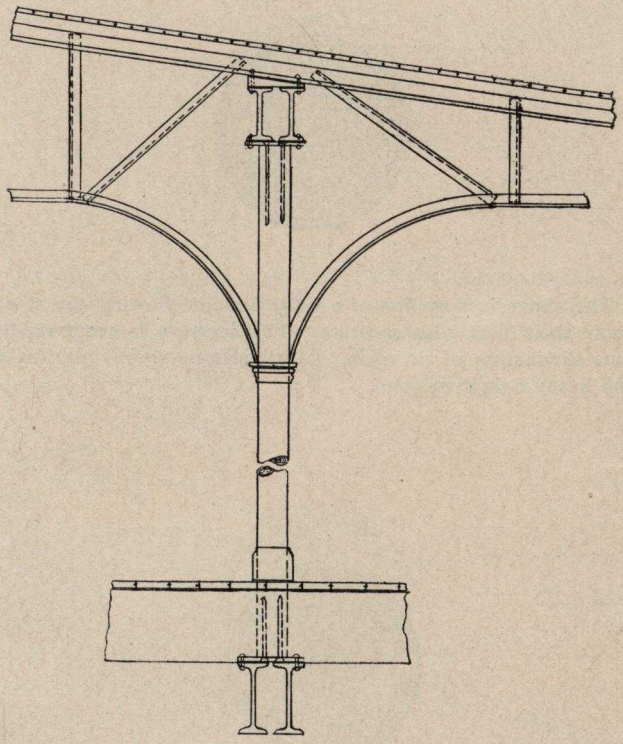


Lally Columns as a continuous veranda support for either wooden girders or steel beams are unsurpassed.

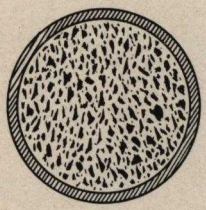
Our special caps present a neat appearance and are particularly adapted to this form of construction.



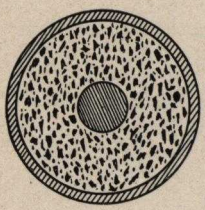
Plan showing cap connections for beams and continuous columns of veranda.



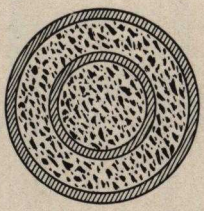
The above is a design showing the advantage and ready application of Lally Columns in railroad station shelters. We solicit inquiries from interested persons in this line of construction.



The above is a section of a Lally Column showing the steel outer shell filled with concrete. The concrete is compressed, thus eliminating all air voids. Lally Columns are made in light and heavy weight sections.

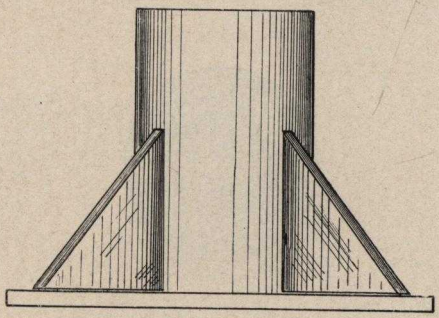


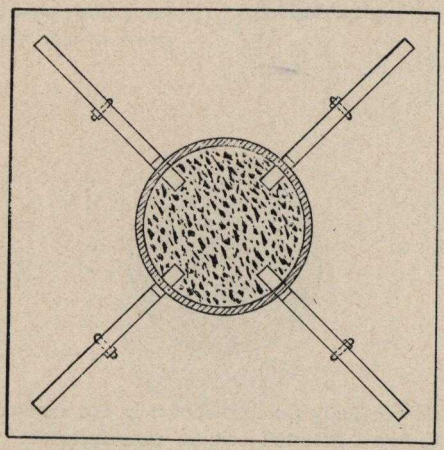
This cut is a section of a Lally Column with a single steel bar reinforcement. This type is used wherever a small additional reinforcement is required.



In this cut is shown a section of a Lally Column reinforced with a pipe. This construction is used wherever reinforcing to the extent of several square inches of metal area is necessary to sustain the load prescribed.

The reinforced Lally Column shown in the section above is the most compact fireproof column manufactured. The four angle irons as well as the concrete within the radius of same are designed to carry the load. The outer shell and the concrete outside the radius of the angles act as fireproofing and make the column practically indestructible.





Here is shown a new steel built-up base attached to a Lally Column. It consists of a steel bottom plate fastened to the four steel brackets which are firmly attached to the column shaft through slots in same.

Stock Sizes of Caps and Bases for Light-Weight Columns

Diam. Col.	Size of Plates
3″	5½″ x 5½″ x ½″
3½″	6″ x 6″ x ½″ — 6″ x 8″ x ½″
4″	6″ x 6″ x ⅝″ — 6″ x 8″ x ⅝″ — 8″ x 8″ x ⅝″
4½″	8″ x 8″ x ¾″
5″	8″ x 8″ x ¾″ — 10″ x 10″ x ¾″
6″	8″ x 8″ x 1″ — 10″ x 10″ x 1″ — 12″ x 12″ x 1″

Stock Lengths of Light-Weight Columns

Diam. Col.	Lengths		
3″	6′-0″	6′- 8″	7′-4″
	6′-4″	6′-10″	7′-6″
	6′-6″	7′- 0″	
3½″	6′-0″	6′-10″	8′-0″
	6′-4″	7′- 0″	8′-6″
	6′-6″	7′- 4″	9′-0″
	6′-8″	7′- 6″	
4″	Same Lengths as 3½″		
4½″	7′-0″	8′-6″	10′-0″
	7′-6″	9′-0″	
	8′-0″	9′-6″	
5″	Same Lengths as 4½″		
6″	8′-0″	9′-0″	10′-0″
	8′-6″	9′-6″	

To avoid delay please confine yourself to these lengths if possible

Price List of Our Light-Weight Lally Columns

Lengths of Columns in Feet, including Caps and Bases

This price list supersedes all previous lists

Diam.	7′-0″	7′-6″	8′-0″	8′-6″	9′-0″	9′-6″	10′-0″	10′-6″	11′-0″	11′-6″	12′-0″	Price for each additional ft. over 12′0″
3″	$1.65	$1.75	$1.90	$2.00	$2.20	$2.40	$2.65	$2.80	$2.95	$3.10	$3.25	$ .27
3½″	1.90	2.00	2.20	2.40	2.65	2.90	3.15	3.40	3.65	3.80	4.00	.35
4″	2.75	3.00	3.25	3.50	3.80	4.10	4.40	4.75	5.10	5.45	5.80	.50
4½″	4.00	4.50	5.00	5.25	5.50	5.75	6.00	6.50	6.75	7.00	7.50	.65
5″	5.00	5.50	5.85	6.20	6.65	7.10	7.55	8.00	8.45	8.90	9.25	.80
6″	6.00	6.50	6.95	7.35	8.00	8.65	9.30	9.95	10 60	11.25	11.90	1.00

These prices include a stock size cap and base complete. For stock sizes, see page 23. Prices of bracket caps on these columns same as heavy weights of same diameter, except 6″ diameter which takes 5½″ heavy weight price. See pages 26 and 27 for prices on heavy-weight columns.

Safe Carrying Capacity of Light-Weight Lally Columns in tons of 2,000 lbs.

Safety factor of 4

Diam.	Weight in lbs. of Plain Col. Shaft per ft.	Length of Column in Feet										
		6′	7′	8′	9′	10′	11′	12′	13′	14′	15′	16′
		Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons
3″	9.64	6	6	5	.....	.....	.....	.....	.....	.....	.....	.....
3½″	13.09	9	9	8	8	7	.....	.....	.....	.....	.....	.....
4″	17.02	13	13	12	12	11	10	.....	.....	.....	.....	.....
4½″	21.05	14	14	13	13	12	11	10	.....	.....	.....	.....
5″	25.90	20	20	19	19	18	18	17	17	16	.....	.....
6″	36.82	28	28	27	27	26	26	25	24	23	23	22

For Standard Stock Lengths of Light-Weight Columns see list on page 23.
See pages 26, 27, and 28, for Heavy-Weight Columns.
All lengths should be given over all, including caps and bases.

REVISED

LALLY HEAVY-

Prices and Sizes Steel Bracket Caps

Diam. of Col.	Size Crown Plate 1 way	Price of 1 way	Size of 2 way	Price of 2 way	Size of 3 way	Price of 3 way	Size of 4 way	Price of 4 way	Price of plain col. shaft per ft.
3½″	4″x 8″x½″	$2.76	4x12x½″	$2.88	8x12x½″	$3.60	12x12x½″	$4.10	$ .52
4″	6″x 8″x½″	2.96	6x12x½″	3.16	8x12x½″	3.66	12x12x½″	4.14	.66
4½″	6″x 9″x½″	3.14	6x14x½″	3.38	9x14x½″	4.00	14x14x½″	4.62	.74
5″	6″x10″x⅝″	3.58	8x15x⅝″	4.24	10x15x⅝″	4.78	15x15x⅝″	5.56	.90
5½″	6″x10″x⅝″	3.86	8x15x⅝″	4.52	10x15x⅝″	4.96	15x15x⅝″	5.66	1.10
6⅝″	8″x12″x⅝″	5.20	10x17x¾″	6.34	12x17x¾″	6.86	17x17x¾″	7.70	1.46
7⅝″	8″x14″x¾″	6.20	10x18x¾″	7.06	14x18x¾″	7.94	18x18x¾″	8.62	1.82
8⅝″	10″x15″x¾″	6.96	10x20x¾″	7.60	15x20x¾″	8.86	20x20x¾″	9.86	2.18
9⅝″	10″x16″x¾″	7.60	10x22x¾″	8 38	16x22x¾″	9.88	22x22x¾″	11.14	2.56
10¾″	12″x17″x¾″	9.36	12x24x¾″	10.44	17x24x¾″	11.48	24x24x¾″	12.92	3.18
12¾″	13″x19″x¾″	11.50	13x24x¾″	12.34	19x24x¾″	13.52	24x24x¾″	14.18	4.36

We manufacture Steel Bracket Caps any size and shape to meet any and all requirements. We charge for extra steel furnished in caps larger than stock sizes

NOVEMBER 1, 1916

WEIGHT COLUMNS

Prices and Sizes of Plate. Cast Iron Caps and Bases

Diam. of Col.	Area of Metal Section of Column	Area of Concrete Section of Column	Size of C. I. Cap	Price of C. I. Cap	Size of C. I. Base	Price of C. I. Base
3½″	2.23″	7.38″	6x 8x ½″	$ .25	6x 8x ½″	$ .25
4″	2.68″	9.88″	8x 8x ⅝″	.40	8x 8x ⅝″	.40
4½″	3.17″	12.73″	8x 8x ¾″	.45	8x 8x ¾″	.45
5″	3.67″	15.96″	10x10x ¾″	.70	10x10x ¾″	.70
5½″	4.32″	19.98″	10x10x ¾″	.70	12x12x1″	1.50
6⅝″	5.58″	28.88″	10x14x1″	1.40	16x16x1½″*	3.40
7⅝″	6.92″	38.72″	12x14x1¼″	2.10	18x18x2″*	5.80
8⅝″	8.40″	50.02″	12x14x1½″	2.10	20x20x2½″*	9.00
9⅝″	10.04″	62.72″	Special	Special	22x22x3″*	12.00
10¾″	11.94″	78.82″	Special	Special	24x24x3″*	20.00
12¾″	14.59″	113.09″	Special	Special	Special	Special

*Beveled

Safe Carrying Capacity of our Heavy-Weight Lally Patent Columns in tons of 2,000 lbs.

Safety factor of 4. These loads can be increased by reinforcing to suit any condition

Outside Diameter	Length of Columns in Feet								Weight per foot
	6′	8′	10′	12′	14′	16′	18′	20′	
	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Tons	Pounds
3½″	12	11	10	9	.....	.....	.....	.....	15
4″	16	15	14	12	11	.....	.....	.....	20
4½″	20	18	17	16	15	.....	.....	.....	24
5″	27	26	24	22	21	19	.....	.....	29
5½″	32	31	29	28	26	24	22	.....	36
6⅝″	45	43	41	40	38	35	34	32	49
7⅝″	58	56	54	52	51	49	46	44	64
8⅝″	74	72	69	67	65	62	60	57	81
9⅝″	93	89	87	85	82	79	77	75	100
10¾″	111	109	107	104	101	99	96	93	123
12¾″	150	146	144	141	139	135	133	130	169

THE popularity of the Lally Column is largely due to its reliability.

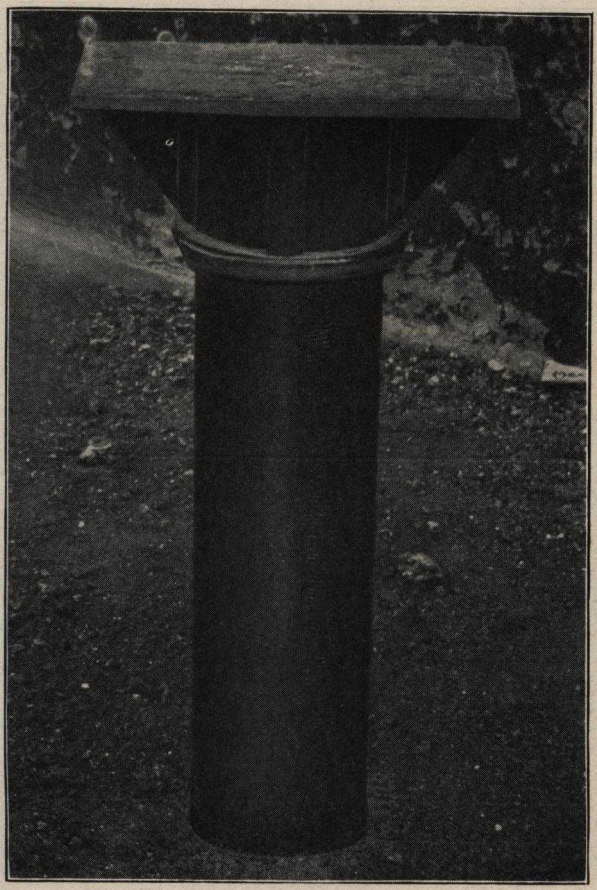
It is an established fact that cast iron is an uncertain quantity. The cast iron cap used by our imitators as shown on page 30 makes the vital part of the column unreliable. The inside of this cast iron sleeve cap rests loosely on the top of the column shaft, and is very often rough and uneven. The depth of the sleeve makes it impracticable to reach the bearing surface with a tool to smooth or face it. This gives the cap an uneven bearing on the column, which results in the glaring weakness as shown by the illustration on page 30.

OUR LALLY STEEL CAPS ARE ALWAYS RELIABLE AND SURE TO CARRY THE LOAD FOR WHICH THEY ARE DESIGNED.

CAST IRON CONNECTION

Above cut shows a two-way, loose, cast-iron bracketed cap which our imitators use. To prove the weakness of this type of beam connection, we have had a test of same at U. S. Arsenal, resulting in an ultimate strength of only **84,200** pounds.

You will note that in this connection the column shaft enters up into a sleeve, the crown plate of the cap resting on the column shaft. The supporting brackets are cast on said sleeve. You can readily see the vast inferiority of this loose connection by the above test.

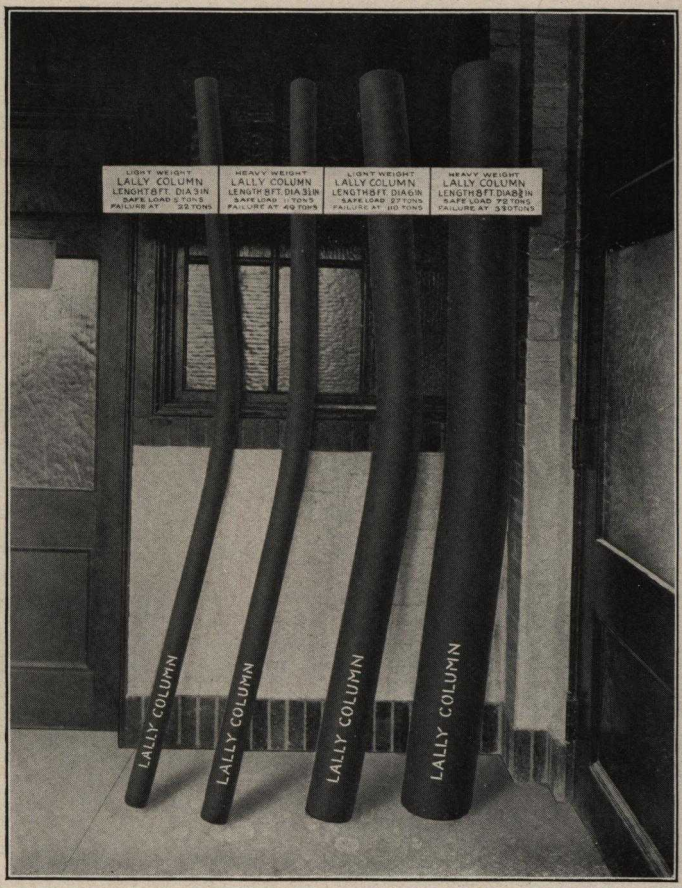


LALLY CONNECTION

Above cut shows the New Lally Steel Bracket Two-way Beam and Column Connection. This cap has been tested at the U. S. Arsenal, offering a resistance of **500,000** pounds, and then only bending the plates and brackets slightly.

We ask you to contrast figures on pages **30** and **31**.

These cuts are half-tones taken from photographs of the identical Caps which were tested.

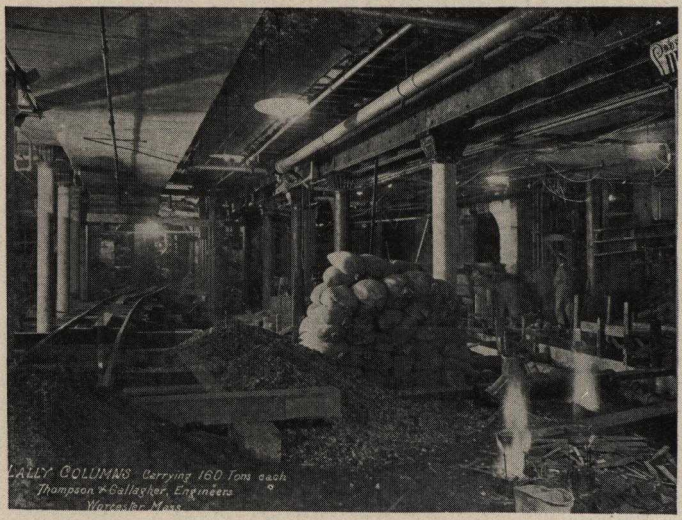


Here are shown four Lally Columns that were tested by the Wentworth Institute of Boston, Mass., with absolutely no solicitation on our part.

You will note on the cards attached to the columns that in each case the failure of the column was at a greater pressure than our listed loads for these sizes.

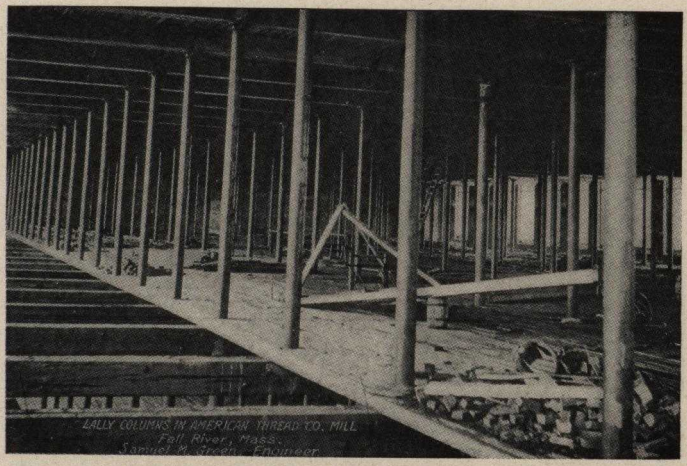
IN the following pages we show pictures of some of the various types of Buildings which we have equipped with Lally Columns.

We especially call your attention to the photographs showing the Lally Columns which have stood in defiance of the ravages of the terrible Chelsea and Salem fires.

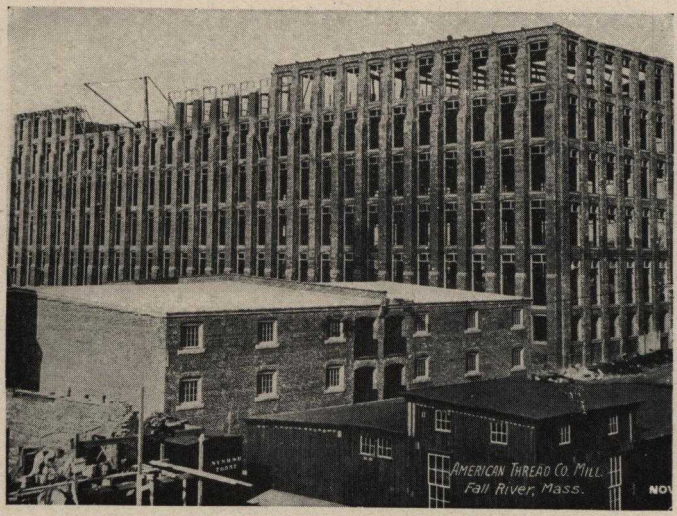


Lally Columns in "Boston Store" of Denholm & McKay Co., Worcester, Mass.

Nearly all architects use Lally Columns for store and mercantile buildings.

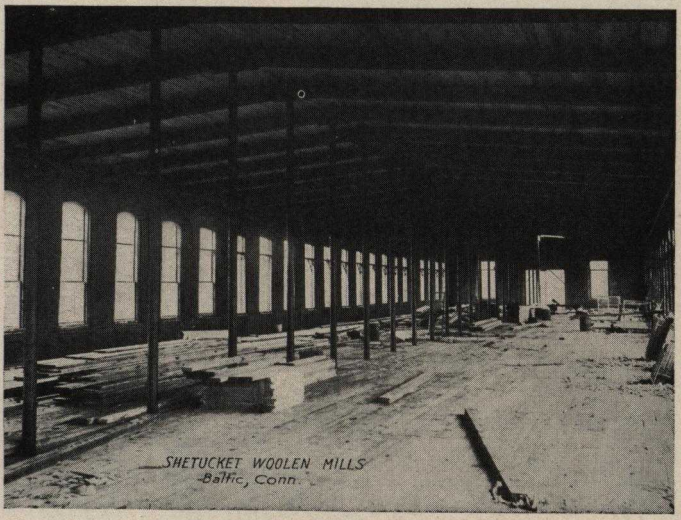


This picture shows one of the six floors of the new Kerr Mill, Fall River, Mass., for the American Thread Co., equipped with Lally Columns, continuous from basement to roof.

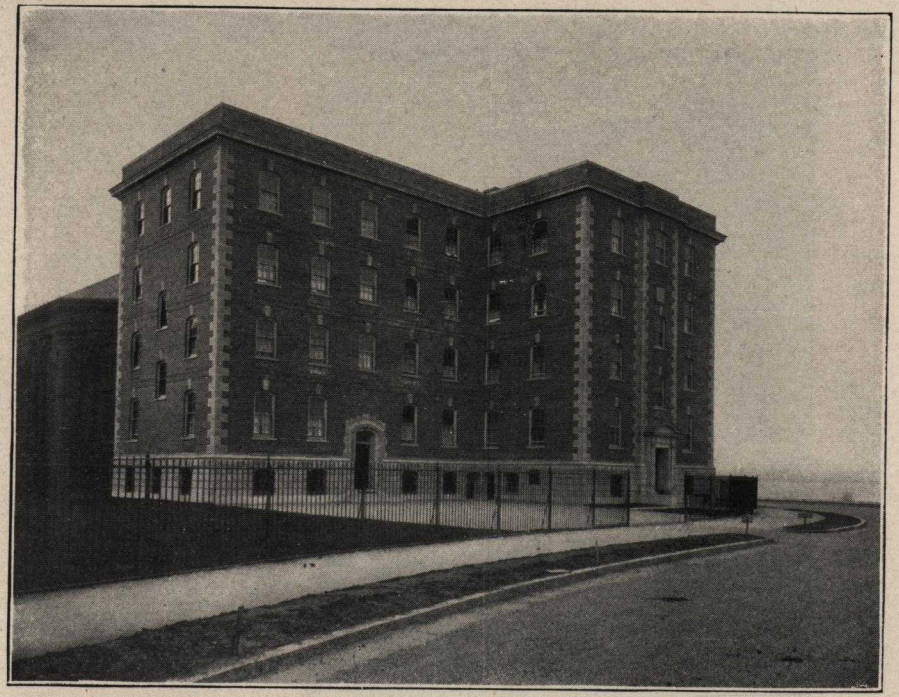


Exterior View of Kerr Mill, Fall River, Mass.

The Lally Columns and connections are used extensively in mill construction. Some of the largest mills in the country are supported by Lally Columns.



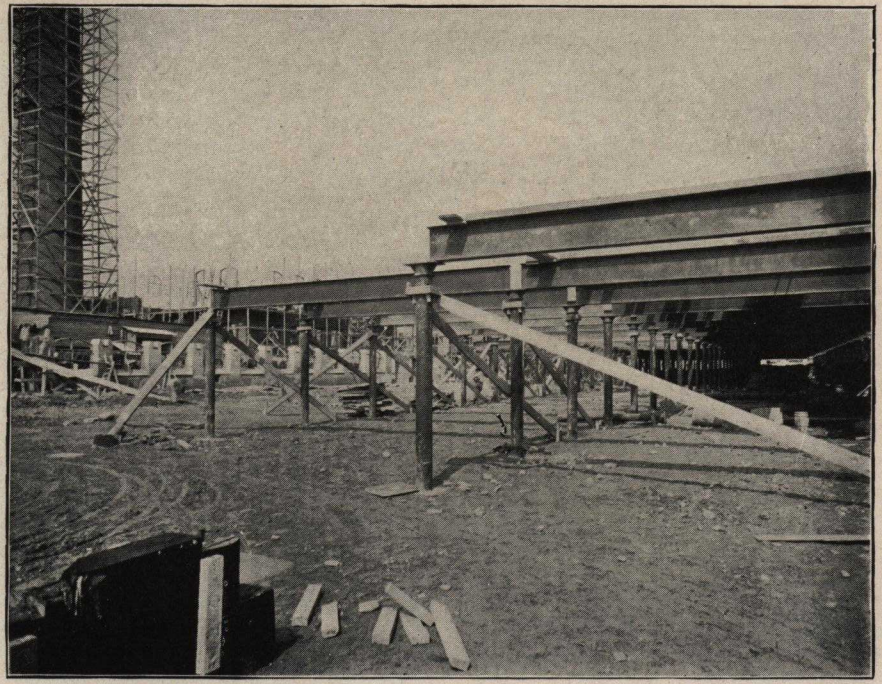
Lally Columns in Shetucket Woolen Mills, Baltic, Conn.



Nurses' Dormitory, Eye and Ear Infirmary — Boston, Mass.
Equipped with Lally Columns from Basement to Roof

Holmes Manufacturing Co. Mill
Lally Columns used throughout

New Bedford, Mass.
Charles W. Praray, Eng.



Holmes Manufacturing Co. Mill — New Bedford, Mass.
Showing Lally Columns in Basement

Domenico Building **Chelsea, Mass.**

Lally Columns used

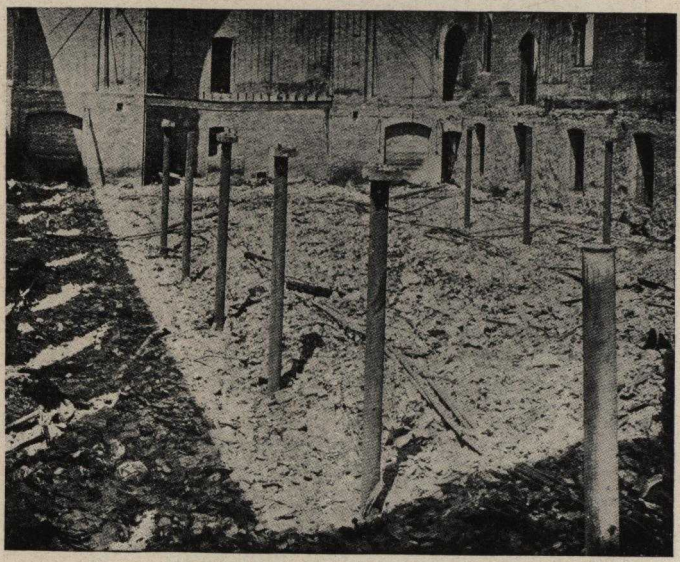
Richmond Building **Brockton, Mass.**

Lally Columns used throughout

Saint Rose Catholic Church — Chelsea, Mass.

Lally Columns used before and after the fire

LALLY COLUMNS IN RUINS OF CHELSEA



Ruins of St. Rose Catholic Church in Chelsea, Mass.

Showing Lally Columns standing as firm as before the fire. This photograph was taken the morning after the fire.

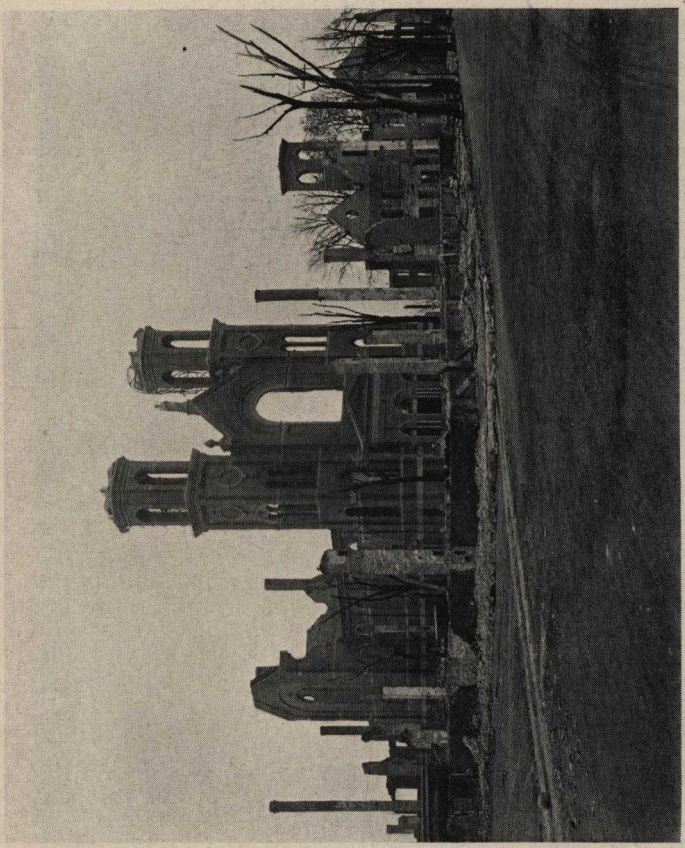
There can be no doubt of the supremacy of the Lally Columns after these wonderful tests for fire resistance.

Another View of the Chelsea Ruins

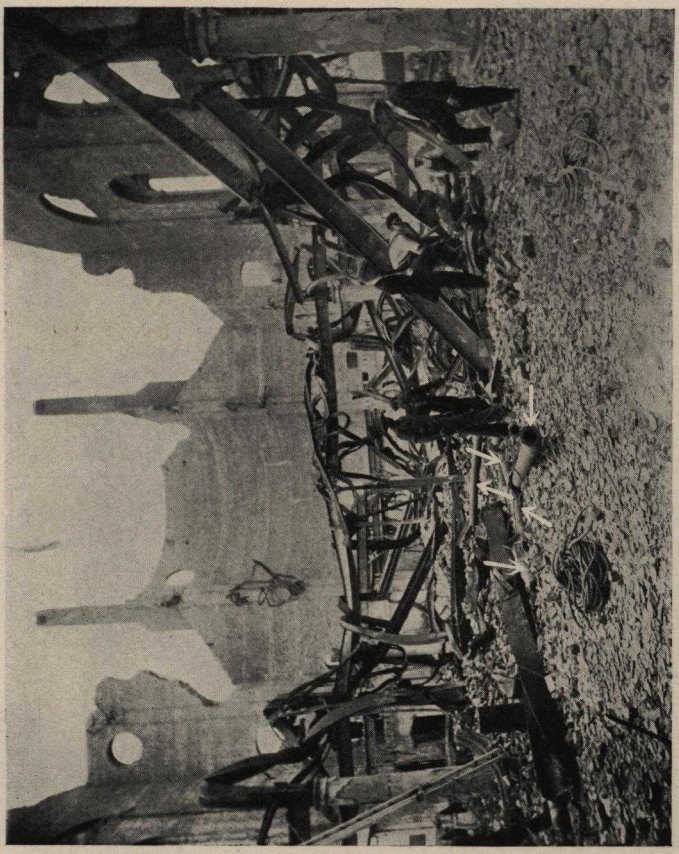
The Lally Columns may be seen here standing upright and unharmed by the terrible fire which destroyed all before it except the Lally Columns.

Another place in Chelsea fire ruins where the Lally Columns stood the test without failure. Note condition of other metal.

In this building, also, the Lally Columns were the only part of the building to stand unharmed through the fire.



View of the ruins of the French Catholic Church and School, Salem, Mass. after the fire.



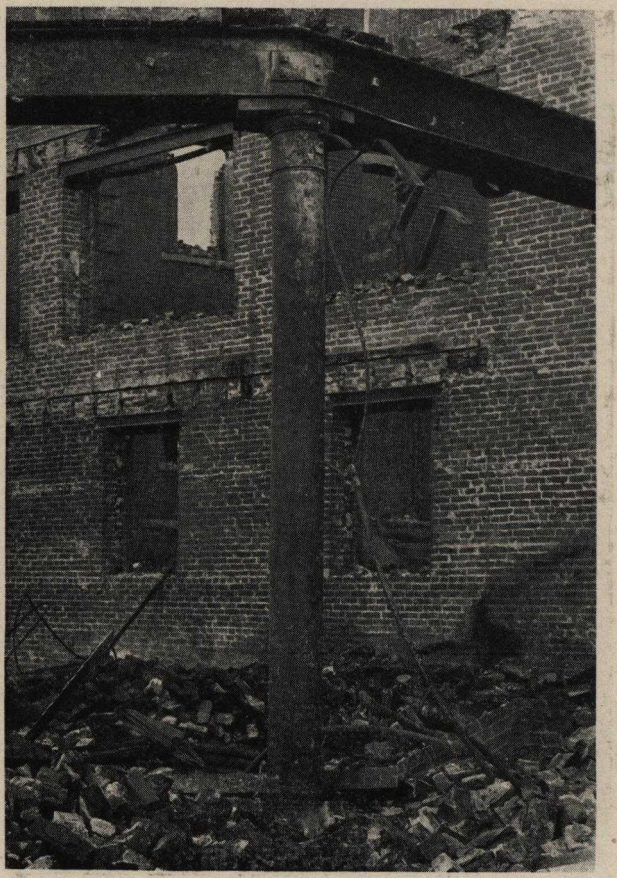
Church ruin, showing a lot of cast iron columns broken in several pieces.

Interior view of the French Catholic Church, Salem, Mass., showing the ruins after the fire. The small white arrows show the condition of the cast iron columns that were used.

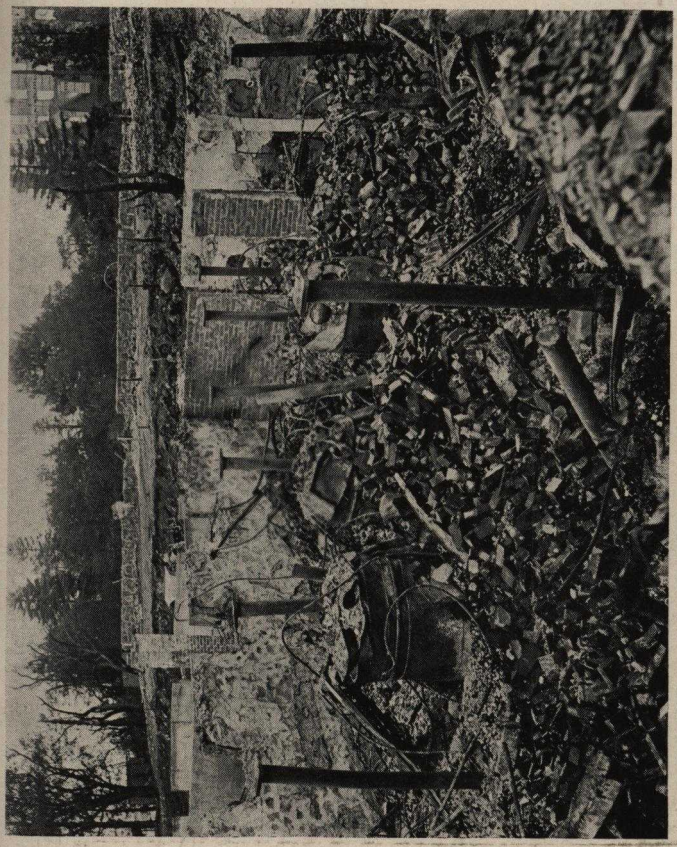
View of the French Parochial School ruins adjoining the church, showing the condition of the Lally Columns after the fire at Salem, Mass.

This building was equipped with cast iron columns which were completely destroyed as shown. The white arrows show some of the destroyed cast iron columns.

Note the condition of cast iron columns. White arrows indicate location.

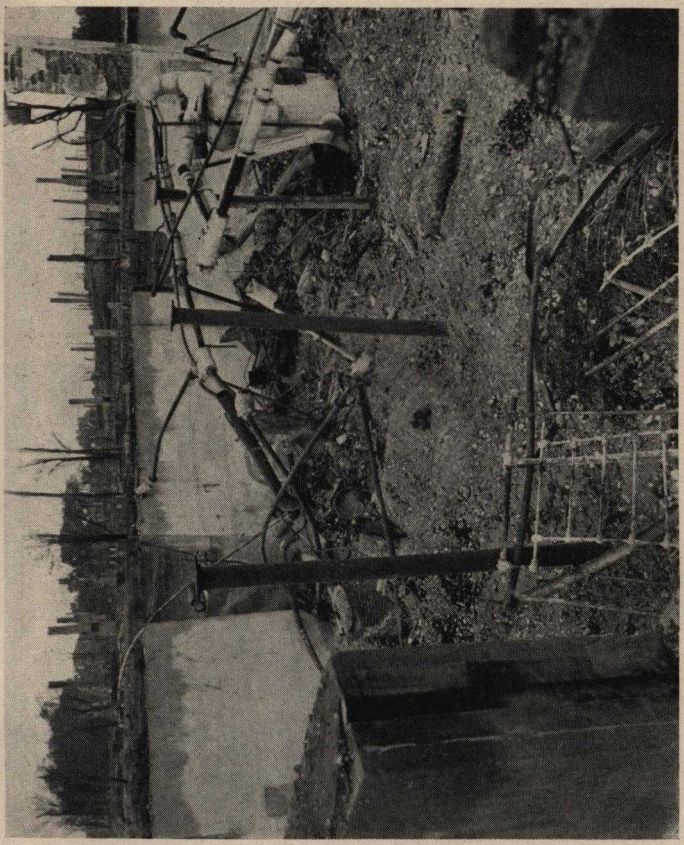


View of Lally Column holding the corner of a building after the fire.



A Salem ruin, showing the condition of the Lally Columns after the fire.

One of the many hundreds of residences where Lally Columns were used in the Salem fire.



Note the condition of all material and contrast with the Lally Columns.

Note carefully the white arrows; they mark the cast iron columns used in the engine house.

The following is a List of a few of the Buildings where LALLY COLUMNS are in use

SHETUCKET WORSTED MILL
Baltic, Conn.
AMERICAN GRAPHAPHONE CO.
Bridgeport, Conn.
BRIDGEPORT BRASS CO. FACTORY
Bridgeport, Conn.
CONNECTICUT BREWERIES CO. BUILDING . . . . Bridgeport, Conn.
POLI THEATER . . Bridgeport, Conn.
AUTO EXCHANGE . . Geo. Lewitt
New Britain, Conn.
NEW BRITAIN THEATER
New Britain, Conn.
C. W. BLAKESLEE . New Haven, Conn.
MALLEY BUILDING, New Haven, Conn.
MOELLER BUILDING
New Haven, Conn.
CITY HALL . . South Norwalk, Conn.
OVERLAND-WATERBURY GARAGE
Waterbury, Conn.
NATCHAUG SCHOOL, Willimantic, Conn.
NUCKOLLS PACKING HOUSE CO.
Pueblo, Col.
ROUMANIAN-GREEK CATHOLIC CHURCH . . . . . Aurora, Ill.
ROUMANIAN SOCIETY HALL
Aurora, Ill.
PACIFIC PRESS PUBLISHING ASSO.
Brookfield, Ill.
AMERICAN FILM CO. BUILDING
Chicago, Ill.
BRUNSWICK-BALKE-COLLENDER BUILDING . . . . . Chicago, Ill.
CHICAGO ART INSTITUTE
Chicago, Ill.
CHARLES BOSTROM BUILDING
Building Commissioner of Chicago
Chicago, Ill.
CHICAGO BEACH HOTEL Chicago, Ill.
CHICAGO PACKING BOX CO. FACTORY . . . . . Chicago, Ill.
GARFIELD PARK STORAGE WAREHOUSE . . . . . Chicago, Ill.
HOLCOMB STEEL CO. WAREHOUSE
Chicago, Ill.
HOME LIFE INSURANCE BUILDING
Chicago, Ill.
HOTEL ASTOR . . . . . Chicago, Ill.
I. A. C. BUILDING . . . . Chicago, Ill.
LAWNDALE WHOLESALE GROCERY BUILDING . . . . Chicago, Ill.
LA SALLE EXTENSION UNIVERSITY
Chicago, Ill.
LIBERTY TRUST & SAVINGS BANK
Chicago, Ill.
MERCHANTS LITHOGRAPHING CO. BUILDING . . . . . Chicago, Ill.
METROPOLITAN STATE BANK
Chicago, Ill.
OPPENHEIMER & CO. DEPT. STORE
Chicago, Ill.
PETTIBONE-MULLIKEN CO. BUILDING . . . . . Chicago, Ill.
POST OFFICE, Logan Square Station
Chicago, Ill.
RECTOR'S RESTAURANT Chicago, Ill.
REGAN PRINTING CO. BUILDING
Chicago, Ill.
SEARS ROEBUCK & CO. OFFICE
Chicago, Ill.
SMITH FORM-A-TRUCK CO. BUILDING . . . . . Chicago, Ill.
ST. KILLIAM'S CHURCH Chicago, Ill.
ST. MELS' CHURCH . . Chicago, Ill.
STOCK YARDS POST OFFICE
Chicago, Ill.
SPOFFORD-WHITE CO. BUILDING
Chicago, Ill.
S. S. KRESGE BUILDING Chicago, Ill.
THE GLOBE MILLS . . . Chicago, Ill.
THIRTEENTH CHRISTIAN SCIENCE CHURCH . . . . . Chicago, Ill.
THOMAS M. SMYTH, Post Office
Chicago, Ill.
THOMPSON RESTAURANTS
Chicago, Ill.
UNION LINEN SUPPLY CO. FACTORY . . . . . Chicago, Ill.
UNITED CIGAR STORES CO.
Chicago, Ill.

WHEELER CLOUGH VARNISH FACTORY . . . . . Chicago, Ill.
WOODLAWN BRANCH, Post Office Chicago, Ill.
WOOLWORTH BUILDING Chicago, Ill.
PUBLIC SCHOOL . . . Glenview, Ill.
ORRINGTON-LUNT LIBRARY BUILDING, Northwestern University, Evanston, Ill.
THORNTON TOWNSHIP HIGH SCHOOL . . . . . Harvey, Ill.
WM. PEASE HOTEL . . . Harvey, Ill.
HINSDALE CLUB HOUSE, Hinsdale, Ill.
EVANSTON HOTEL . . Evanston, Ill.
CHICAGO STORE BUILDING Kankakee, Ill.
OAK PARK FIRE DEPARTMENT Oak Park, Ill.
LETTS & BENNETT APARTMENT BUILDING . . . . . Rockford, Ill.
FIRST CHURCH CHRISTIAN SCIENCE Wilmette, Ill.
GRADE SCHOOL . . . Hammond, Ind.
ST. MICHAEL'S SCHOOL Schererville, Ind.
WARSAW THEATER AND OFFICE BUILDING . . . . . Warsaw, Ind.
COMMONS BUILDING Dubuque, Ia.
CUSHMAN-HOLLIS SHOE FACTORY Auburn, Maine
Y. M. C. A. . . . . Augusta, Maine
EASTERN TRUST BUILDING Bangor, Maine
BATES STREET FACTORY Lewiston, Maine
JOHN D. ROCKEFELLER, Jr., RESIDENCE . . Seal Harbor, Maine
ELKS CLUB . . . . Waterville, Maine
LEACH & GARNER FACTORY Attleboro, Mass.
ATTLEBORO SCHOOL, Attleboro, Mass.
WALKER MISSIONARY HOME Auburndale, Mass.
BELMONT SPRINGS COUNTRY CLUB . . . . . Belmont, Mass.
BEVERLY HIGH SCHOOL Beverly, Mass.
ALMSHOUSE AND HOSPITAL (city of Boston) . . . . . Boston, Mass.
EYE AND EAR INFIRMARY (Nurses' Dormitory) . . . . . Boston, Mass.
FERGUSON'S BAKERY, Boston, Mass.
F. W. WOOLWORTH CO., Boston, Mass.
N. E. COAT & TOWEL SUPPLY CO. Boston, Mass.
PLANT SHOE FACTORY, Boston, Mass.
UNITED DRUG CO. . . Boston, Mass.
GEO. L. DOW BUILDING Cambridge, Mass.
HENNESSEY BUILDING Cambridge
MURRAY & EMERY CO. FACTORY Cambridge, Mass.
RIVERSIDE PRESS, Cambridge, Mass.
SALVATION ARMY BUILDING Cambridge, Mass.
CAMBRIDGE PAPER BOX CO. Cambridge, Mass.
J. L. HAMMETT CO., School Supplies Cambridge, Mass.
TECH. BLOCK . . . Cambridge, Mass.
SAINT ROSE CHURCH (before and after the fire) . . . Chelsea, Mass.
LAWSON STABLES, "Dreamwold" Egypt, Mass.
KERR MILL, AMERICAN THREAD Fall River, Mass.
ROBICHAUD & MOUNTAIN BUILDING . . . . . Gardner, Mass.
HEARN BUILDING . Holyoke, Mass.
FARR ALPACA MILL Holyoke, Mass.
CHERRY & WEBB STORES Lawrence, Mass.
WASHINGTON MILLS, Lawrence, Mass.
CITY STABLES . . . . Lowell, Mass.
ST. PETER'S SCHOOL . Lowell, Mass.
JOHN PILLING SHOE FACTORY Lowell, Mass.
LUDLOW MILL . . . Ludlow, Mass.
MALDEN HIGH SCHOOL Malden, Mass.
BOSTON STORES, New Bedford, Mass.
NEILD MANUFACTURING CO. MILL New Bedford, Mass.
BOOTH MANUFACTURING CO. MILL . . . . . New Bedford, Mass.
HOLMES MANUFACTURING CO. MILL . . . . . New Bedford, Mass.
N. E. TEL. & TEL. COMPANY BUILDINGS throughout New England
PUBLIC LIBRARY . Newton, Mass.
NEW HOME SEWING MACHINE FACTORY . . . . . Orange, Mass.
FARRELL BUILDING, Pittsfield, Mass.
WAITE BUILDING . . Pittsfield, Mass.

QUINCY HIGH SCHOOL, Quincy, Mass.
ELKS HOME . . . . . Revere, Mass.
EXPOSITION BUILDINGS Springfield, Mass.
STATE INFIRMARY, Tewksbury, Mass.
TAYLOR BUILDING . Wellesley, Mass.
GERMAN HOME, West Roxbury, Mass.
KELLY & HAWES GARAGE, Winchester
WOLLASTON HIGH SCHOOL Wollaston, Mass.
RICHARDSON SILK MILL Belding, Mich.
KNIGHTS OF MACCABEES OFFICE BUILDING . . . . Port Huron, Mich.
BLUE VALLEY CREAMERY CO. BUILDING . . . Grand Rapids, Mich.
BANCROFT REALTY CO. BUILDING Saginaw, Mich.
ST. JOSEPH SCHOOL, St. Joseph, Mich.
SOUTHERN ALUMINUM CO. BLDG. Whitney, N. C.
ERIE R.R. STATION . Allendale, N. J.
EMBRIE MISSION . Englewood, N. J.
D. L. & W. R.R. STATION AND HOUSES . . . . . Glen Ridge, N. J.
UNIVERSAL FILM CO. . Leonia, N. J.
DURATEX CO. FACTORY, Newark, N. J.
STATE ARMORY . . Red Bank, N. J.
Y. M. C. A. BUILDING . Summit, N. J.
AJAX RUBBER CO. . Trenton, N. J.
TRENTON WATER DEPT. STATION Trenton, N. J.
"BOSTON STORE," Binghamton, N. Y.
KILMER BUILDING, Binghamton, N. Y.
WALTER LAW STABLES Briarcliffe, N. Y.
BORDEN MILK CO. STATION Brooklyn, N. Y.
BOTANICAL GARDEN, Brooklyn, N. Y.
BROOKLYN BASEBALL CLUB, EBBETTS STADIUM . Brooklyn, N. Y.
COLUMBUS DISTILLING CO. Brooklyn, N. Y.
HECKER-JONES-JEWEL MILLING CO. BUILDING . . . Brooklyn, N. Y.
KIRKMAN SOAP CO., Brooklyn, N. Y.
NORTH SIDE BANK . Brooklyn, N. Y.
ST. MARY'S CHURCH, Court Street Brooklyn, N. Y.
STANDARD OIL CO. . Brooklyn, N. Y.
ALEX. CAMPBELL MILK STATION Coney Island, N. Y.
COOK'S BATHS . Coney Island, N. Y.
ACTORS' CLUB . . . Freeport, N. Y.
HARRIMAN SCHOOL, Harriman, N. Y.
FIRE HOUSE . . Mamaroneck, N. Y.
PORT CHESTER HOSPITAL Port Chester, N. Y.
DUTCHESS MANUFACTURING CO. Poughkeepsie, N. Y.
FIAT MOTOR CO., Poughkeepsie, N. Y.
PRICE FIREPROOFING CO. BUILDING . . . Poughkeepsie, N. Y.
KNAPP BUILDING . . Rochester, N. Y.
SEA VIEW HOSPITAL Staten Island, N. Y.
GERMAN ODD FELLOWS HOME Yonkers, N. Y.
W. K. VANDERBILT RESIDENCE Jericho, L. I.
LOFT CANDY CO. . . Long Island City
PORT WASHINGTON HIGH SCHOOL . . . Port Washington, L. I.
SAGE FOUNDATION HOMES Forest Hills, L. I.
WEST JEFFERSON CREAMERY Columbus, Ohio
UNION CLOTHING CO. BUILDING Columbus, Ohio
MONROE TOWNSHIP SCHOOL London, Ohio
KAPPA SIGMA FRATERNITY HOUSE Norman, Okla.
FELLOWS-HUBER SILK MILL E. Stroudsburg, Pa.
CHARLES M. SCHWAB RESIDENCE Loretta, Pa.
McCLINTOCK RESIDENCE Pittsburgh, Pa.
HARRY PAYNE WHITNEY RESIDENCE . . . . Newport, R. I.
GREEN & DANIELS FACTORY Pawtucket, R. I.
ODD FELLOWS TEMPLE Sioux Falls, S. Dak.
UNIVERSITY OF VIRGINIA Charlottesville, Va.
CHURCH OF NOTRE DAME DES VICTOIRES . . . . St. Johnsbury, Vt.
EXCELSIOR REALTY CO. BUILDING Milwaukee, Wis.

Safe Carrying Capacity for Cast Iron Columns

For reference only. We do not manufacture or sell cast iron columns

This table of strengths on cast iron columns has been computed from a series of 20 tests made at the United States Arsenal on cast iron columns of different makes, and some of which were made by the Arsenal itself for commercial use, so that there is no guesswork about this schedule; it is taken from the actual tests, made on the specimens taking the average compression with the average diameters contained in their own lengths on the tests made for the bases adapted in computing this table. The tests referred to can be obtained through the U. S. Government, should their accuracy be questioned. In reducing this table we have used a factor of 10 for safety, which is required in some cities, so that by multiplying any given load in this table by 10 you have the ultimate compression in tons, or if you want to use a factor of 8, which is allowable in some cities, add 25 per cent to any given figures of tons in said table.

Outside Diameter	Thickness of Shell	Weight per Foot	Sectional Area	Cast Iron. Length of Columns in Feet											
				8	10	12	14	16	18	20	22	24	26	28	30
				Safe loads in tons, factor of 10 used for safety											
6″	1″	49.1	15.7	34	29	25	22	19	16	12	....	....	....	....	....
6″	1¼″	58.	18.6	41	34	30	26	23	19	14	....	....	....	....	....
6″	1½″	66.	21.2	47	39	34	30	26	22	16	....	....	....	....	....
6″	2″	78.5	25.1	55	46	41	36	31	26	20	....	....	....	....	....
7″	1″	58.90	18.9	47	40	34	31	28	25	21	18	....	....	....	....
7″	1¼″	70.	22.5	56	48	41	37	33	30	25	22	....	....	....	....
7″	1½″	80.	25.9	65	55	47	42	38	34	29	26	....	....	....	....

8″	1″	68.7	22.	57	52	44	39	36	33	29	26	23	....	....	....
8″	1½″	82.7	26.5	69	62	54	47	43	39	36	31	28	....	....	....
8″	1½″	95.	30.6	80	72	62	55	50	45	41	36	32	....	....	....
8″	2″	117.	37.6	98	89	76	67	62	56	50	45	40	....	....	....
9″	1″	78.5	25.1	70	63	55	51	45	41	38	35	31	....	....	....
9″	1½″	110.	35.3	99	88	78	72	63	58	54	49	44	....	....	....
9″	2″	137.	43.9	123	110	97	89	79	72	68	61	54	....	....	....
10″	1″	88.4	28.3	....	74	68	62	54	50	46	43	41	....	....	....
10″	1½″	125.	40.1	....	104	97	85	77	72	66	62	58	....	....	....
10″	1¾″	141.6	45.4	....	138	110	101	88	81	74	70	65	....	....	....
10″	2″	160.4	50.2	....	131	121	111	97	90	82	77	72	....	....	....
11″	1″	98.2	31.4	....	88	79	74	67	69	56	51	48	....	....	....
11″	1½″	139.7	44.8	....	125	112	106	95	87	80	73	69	....	....	....
11″	1¾″	158.7	50.9	....	143	128	120	108	98	91	83	78	....	....	....
11″	2″	176.5	56.6	....	154	142	134	120	110	101	93	87	....	....	....
12″	1″	107.5	34.6	....	97	90	83	76	70	64	60	57	....	....	....
12″	1½″	154.6	49.5	....	139	129	120	104	101	91	85	81	....	....	....
12″	1¾″	175.5	56.4	....	158	147	136	125	115	104	98	92	....	....	....
12″	2″	195.8	62.8	....	176	164	152	139	128	116	109	103	....	....	....

THE various improvements on LALLY COLUMNS are covered by the following patents. Any infringement on these patents will be prosecuted to the full extent of the law.

Pat. Nov. 22, 1898
Pat. Aug. 1, 1905
Pat. Mar. 27, 1906
Pat. Nov. 13, 1906
Pat. Feb. 5, 1907
Pat. Feb. 19, 1907
Pat. Oct. 29, 1907
Pat. Oct. 20, 1908
Pat. Dec. 8, 1908
Pat. Aug. 26, 1913
Pat. May 13, 1916

THE LALLY COLUMN is endorsed by leading engineers and by the Chief Engineer of the Department of the Supervising Architect, United States Government

Griffith-Stillings Press
Boston, Mass.